1 term   2 terms   3 terms
↓   ↓   ↓

! DAILY QUEST

Given the polynomials, identify the monomial, binomial and trinomial.

① $5x^2 + 6y^3$ bin.

② $5x^2y^3$ mon.

③ $x^2 + 3x - 6$ Tri.

④ xyz mon.

⑤ $y + 2(5 + y)$ bin.

⑥ $4x^7 + 6x^6 + 5x$ Tri.

⑦ $7 - 10y$ bin.

Homework Lesson 3.2/14.1

1. Jalen earns a base salary of $40 a day plus 20% of his sales. The expression 40 + .2s can be used to represent how much he earns.

    - What does 40 represent? base salary

    - What does 0.2 represent? 20% of his sales

    - What does s represent? amount sold in sales

    - Using the expression 40 + .2s, how much will Jalen earn if he sells $420 in merchandise?

$$40 + .2s$$
$$40 + .2(420)$$
$$40 + 84$$
$$\boxed{124}$$

Evaluate the expression $x = 3$ and $y = -4$

2. $6(y + 7) - 2x^2$

$$\bigcirc$$

$$6(-4 + 7) - 2(3)^2$$

$$6(3) - 2(3)^2$$
$$6(3) - 2(9)$$
$$18 = 18$$
$$0$$

Write an equivalent expression by simplifying the problem.

3. $25b + 14 - 16b$

$9b + 14$
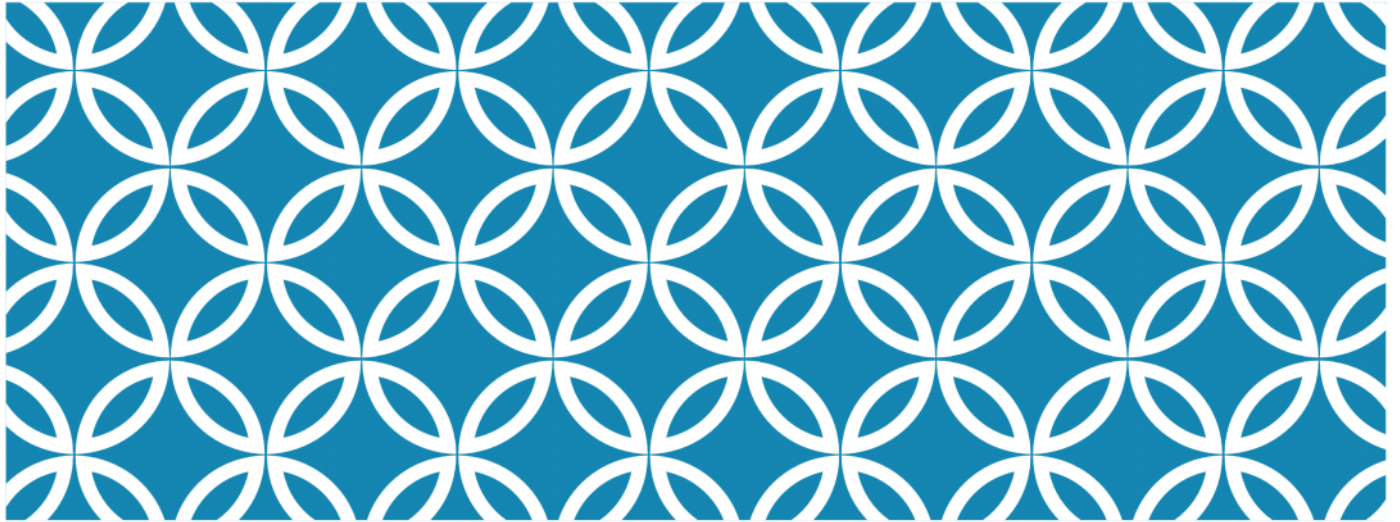
4. $16x + 15 - 4x - 8$

$12x + 7$

6. $22a - 16a^2 + 27a^2 + 11a - 39$

$33a + 11a^2 - 39$

5. $6x^2 + 9y - 12 + 4y - 3x^2$

$3x^2 + 13y - 12$

7. $5a^2b^3 + 11a^3 + 7a^2b^3 - 3a^3 + 12 - 2a^2b^3$

$10a^2b^3 + 8a^3 + 12$

LESSON 3.2/14.1
EQUIVALENT EXPRESSIONS
WITH DISTRIBUTIVE PROPERTY

Goal: To identify, evaluate and use operations with expressions/polynomials.

Obj: SWBAT make equivalent expressions with distributive property.

DISTRIBUTIVE PROPERTY

Basically it's multiply a value outside a set of Parentheses(Grouping symbols) to values inside the grouping symbols.

Situations

Incorrect (distributive)

$3 - (2x + 1)$

$(5x - 3) - 4$

$(3x + 2) + (4x - 3)$

What do you notice is the difference between correct and incorrect distributive property?

Correct (distributive)

$3(2x + 1)$

$(5x - 3)(-4)$

$(3x + 2)(4x - 3)$

PROBLEM 1:

$$x^2 \cdot x^3 = x^{2+3} = x^5$$

Simplify the expression into simplest form.

Prove that each simplified expression is equivalent.

$2x^1(x^1 - 4)$

$2x^2 - 8x$

$3x^2(x^1 + 7)$

$3x^3 + 21x^2$

$3x^4(2x^2 + 5x^1)$

$6x^6 + 15x^5$

$-2x^3(6x^1 - 5x^2)$

$-12x^4 + 10x^5$

PROBLEM 1A:

Simplify the expression into simplest form.

Prove that each simplified expression is equivalent.

$$-5 + 2(8 - 4y)$$

$-5 + 16 - 8y$

$$\boxed{11 - 8y}$$

answer

$$10 - 3(m + 3)$$

$10 - 3m - 9$

$$-3m + 1$$

PROBLEM 1B:

Simplify the expression into simplest form.

$$5(1 - 9x) + 4$$

$$\boxed{5} - 45x \boxed{+4}$$

$$\boxed{9 - 45x}$$

$$-2(10x + 3) + 10x$$

$$\boxed{-20x} - 6 \boxed{+10x}$$

$$\boxed{-10x - 6}$$

PROBLEM 1C:

Simplify the expression into simplest form.

$$12 - 3(4 - x) + 4x$$

$$\boxed{12}\ \boxed{-12}\ \left(+3x\right)\ \left(+4x\right)$$

$$0 + 7x$$

$$\boxed{7x}$$

$$-2(2x - 5) + 5x + 6$$

$$\boxed{-4x}\ \left(+10\right)\ \boxed{+5x}\ \left(+6\right)$$

$$1x + 16$$

PROBLEM 1D: CHALLENGE

Simplify the expression into simplest form.

$$4y^4 - (3y^2 + 3y^4) + y^2$$

$$-m^3 - (2n^2 - m^3) + 6n^2$$

PROBLEM 2:

Which expressions below are equivalent to $8b+3(2b+5)-3$

$I.\ 8b+6b-2$

$II.\ 8b+6b+15-3$

$III.\ 8b+3(7b)-3$

$IV.\ 14b+12$

PROBLEM 2A:

Which expressions below are equivalent to $6x - 5(-3 - 2x)$

I. $6x + 15 + 10x$

II. $6x - 15 - 10x$

III. $16x + 15$

IV. $-4x - 15$

PROBLEM 2B:

Which expressions below are equivalent to $6y+9-2-8y+4y^2$

I. $2y^3 + 7$

II. $6y + 7 - 8y + 4y^2$

III. $-2y + 7 + 4y^2$

IV. $18y^3 + 7$